

DO BASKETBALL SHOOTING SLEEVES REALLY HELP IMPROVE YOUR SHOOTING PERCENTAGE?

PROHLAD PANDAY

Abstract

A basketball sleeve is worn by basketball players sometimes as an accessory or for the benefits of the compression. It extends from the biceps to the wrist and is made of nylon and spandex. I decided to find out whether basketball shooting sleeves really help improve your shooting percentage and efficiency. I needed a basketball court, but I wanted the experiment to go a little quicker, so I decided to use the Hoop Guru Swish 365 court in Hinckley, OH. They have The Gun 10k basketball shooting machine by Shoot-A-Way, which passes the ball back to the shooters after they shoot. There are eight shooting machines in the court. I used 14 test subjects for the experiment. For the experiment, I had each test subject shoot 25 free-throws with no sleeves, 25 with the sleeve on their dominant hand, 25 with the sleeve on their non-dominant hand, and 25 with both sleeves, so 100 free-throws in all. The results of the experiment were inconsistent. Some test subjects would get their best percentage using no sleeves, some would get their best using the sleeve on their dominant hand, etc. I then realized that shooting sleeves may help improve blood flow and reduce after game soreness, but it might just be that the player's mind can trick them and make them feel that they are shooting good because of the sleeves. This is most likely an example of the placebo effect. My hypothesis was not supported by my data and results.

Introduction

Reason for Interest

I love to play and watch basketball games. When I saw my favorite NBA players on TV and some kids on the opposite teams while playing with my travel basketball (AAU) team, wearing basketball shooting sleeves, I thought to myself, "*Are they wearing shooting sleeves as a fashion statement or do shooting sleeves really help you in a basketball game?*" That inspired me for my project, "Do Basketball Shooting Sleeves Improve Your Shooting Percentage?". As a fan of basketball, I decided this would be a fun topic to research and experiment.

Historical Background

The first person to wear a shooting sleeve was NBA star, Allen Iverson. He began wearing it in the 2000-2001 NBA season because he had bursitis (inflammation of the bursa) in his elbow. He led his team, the Philadelphia 76ers, to the finals. They would lose to the talented Los Angeles Lakers, led by Kobe Bryant and Shaquille

O'Neal, in a 4-1 series. Eventually, fans would start wearing sleeves as a fashion statement, and by 2008, the shooting sleeves were the most popular, non-apparel, items sold by the NBA.

Long after Iverson's elbow injury, he continued to wear his basketball sleeve. Many people believe it is the placebo effect, either Allen Iverson believes that the sleeve will prevent future injuries, or that it will make him play better because Iverson did have a phenomenal season when he started using the sleeve. The placebo effect is positive thinking of the person that makes the person feel better and confident and believes a treatment or procedure will work.

Many basketball stars wear basketball sleeves in the NBA today, as if you watch a game you will see someone wearing a basketball shooting sleeve. Some examples of players who wear shooting sleeves are LeBron James, Russell Westbrook, Paul George, Kyrie Irving, and many others. Most people who wear sleeves would say that it helps them shoot better, which is why they are called shooting sleeves. In the end, we still do not have much proof to say whether shooting sleeves help you in the game.

Scientific Background

Most of the time, the reason athletes wear sleeves is for compression. Most athletes that wear a compression sleeve either said that the sleeve gives them confidence because it is stylish, or they wear it for compression purposes. Athletes from all sports wear these compression sleeves, whether they are leg sleeves, arm sleeves, or many more variants of the sleeves.

People have been using compression sleeves that were originally intended to treat disorders relating to the veins like thrombosis for over 60 years. Compression sleeves used for sports are designed to squeeze blood vessels and open the blood vessels forcefully which helps lower your heart rate. Study shows that compression sleeves reduce muscle soreness.

Overall, compression sleeves do prove to give you quicker recovery time and help your blood vessels move faster in your arm. They can also help if you have an elbow soreness. Shooting sleeves help to regulate the temperature in the arm, improve flexibility, and add compression to increase circulation. Some people like the feel of it and some people don't. In conclusion, compression sleeves have a couple of medical benefits, and you would use it in a game if you like using it.

Reason Proof should be done

I was hoping if I can prove that basketball shooting sleeves really help improve your shooting efficiency, I can suggest all my teammates from my CYO (school) and AAU (travel) basketball teams to wear basketball shooting sleeves and thereby we all can shoot better, and our teams can become better basketball teams.

How Information Can be Used

The results of this experiment can be put to practical use by people to decide for themselves whether they want to use the shooting sleeves to their advantage or not.

Experimental

Problem, Need, or Question:

Do basketball shooting sleeves increase one's shooting percentage in basketball?

Hypothesis or Design Statement:

If I wear two basketball shooting sleeves, one on each hand, then I should have my highest possible basketball shooting percentage.

Materials

- Two Elite Nike shooting sleeves
- Two CompressionZ arm compression sleeves
- Three Wilson NCAA basketballs
- The Gun 10k basketball shooting machine by Shoot-A-Way
- Hoop Guru's Swish 365 gym in Hinckley, OH
- +10 test subjects

Procedure

1. Get your test subjects to consent for helping with the project
2. Book a shooting session for one of the shooting machines in Hoop Guru, Hinckley at <https://hinckley.swish365.com/book-a-shooting-session>
3. Use Hoop Guru's Swish 365 gym for their shooting machines.
4. Each test subject must shoot 25 free-throws with no sleeves, 25 with the sleeve on their dominant hand, 25 with the sleeve on the non-dominant hand, and 25 with both sleeves.
5. Record the results.
6. Repeat from step 1 for all the test subjects.
7. Analyze the data.

Observations

During the experiment, I observed the results after each time the test subject used a different number of sleeves on their hands. Another qualitative observation I had was that the results of the experiment were very mixed and inconsistent. Some of my quantitative observations included measuring and recording the fraction of shots made by shots attempted and the percentage results. Also, I recorded how much shooting sleeves they were wearing, and I took pictures of the results after each set of 25 shots with a phone. The basketball shooting machines displayed the results after each of the 4 sets.

Data Analysis

The variable, which was the number of sleeves worn, did not make much of a difference. For each person, the results were different. One of the errors I did for some of my test subjects were that they were not warmed up. That would have changed the results. I should have let the test subjects take 10 to 20 free throws so they would be loose, warmed up, and ready to go. One uncontrolled event was that if the test subject was too short. On the Swish

365 basketball shooting machines, there was a net that surrounded the basketball hoop. It was a little high, so if you were short, you had to shoot with a high arc. For most of my test subjects it was fine, but there were one or two people that were short. The net could not be lowered. If I could have done this project differently, I would have researched a lot more on the science behind compression and compression sleeves. Also, I would have researched about how the compression sleeves helps with all sports. If I were to continue this project, I would have the test subjects shoot all around the court.

Conclusion

My hypothesis was that if I wear two basketball shooting sleeves, one on each hand, then I should have my highest possible basketball shooting percentage. My results do not support my hypothesis. My experimental results were mixed-some of my test subjects would get their highest shooting percentage with no sleeves, some would get their best with two sleeves, etc., on an average, there is no significant difference in their shooting percentages with sleeves or no sleeves. Shooting sleeves may help improve shooting posture, improve blood flow and reduce soreness. I think wearing a shooting sleeve might have psychological benefits on the person and it can also be a placebo effect on the player. It makes a player believe they can be better, so they become better and feel more confident. In order to become a good shooter and improve your shooting percentage, one must put in the time to practice under good coaching, instead of depending completely on shooting sleeves. The benefits that come with wearing shooting sleeves may help improve the player's ability to shoot. In conclusion, no proof is shown that shooting sleeves help you improve basketball shooting efficiency.